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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,185	05/07/2001	Christopher W. Smith	4152-399001	2731

32588 7590 12/17/2002

APPLIED MATERIALS, INC.  
2881 SCOTT BLVD. M/S 2061  
SANTA CLARA, CA 95050

EXAMINER
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MCDONALD, SHANTESE L

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/851,185

Applicant(s)  
Smith et al.

Examiner  
McDonald, Shantese

Art Unit  
3723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on May 7, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-23 is/are allowed.
- 6) ☒ Claim(s) 1-16, 19, 20, and 24 is/are rejected.
- 7) ☒ Claim(s) 17, 18, and 25 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2 6) ☐ Other:

Art Unit: 3723

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 10 recites the limitation "the membrane backing" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9, 11-16, 19, 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tietz in view of Xu et al.

Tietz teaches a substrate holder, 80, to hold a substrate, a continuous polishing belt, 456, with a width at least as wide as the substrate holder, driven continuously during polishing, a backing member, 476, positioned on a side of the polishing belt opposite the substrate holder.

Tietz also teaches that the belt is a belt that extends between a feed and take-up roller, (col. 16, lines 26-35). Tietz teaches all the limitations of the claims except for the belt having a plurality of

Art Unit: 3723

uniformly spaced grooves, oriented substantially perpendicular to the first direction of motion, formed therein, the grooves having a depth of at least 0.02 inches, a width of at least 0.015 inches and a pitch of at least 0.09 inches. Xu et al. teaches a belt having a plurality of uniformly spaced grooves, oriented substantially perpendicular to the first direction of motion, (fig. 1), and the grooves having a depth of at least 0.02 inches, a width of at least 0.015 inches and a pitch of at least 0.09 inches, (col. 5, lines 43-46). It would have been obvious to one having ordinary skill in the art to construct the apparatus of Tietz with the belt, as taught by Xu et al., in order to enhance the polishing capabilities.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tietz as modified by Xu et al. as applied to claims 1-9, 11-16, 19,20 and 24 above, and further in view of Shendon.

Tietz as modified by Xu et al. teaches all the limitations of the claims except for a fluid layer being interposed between the membrane backing member and the polishing belt. Shendon teaches a fluid layer being interposed between the membrane backing member and the polishing belt, (pg. 19, lines 22-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made, to provide the apparatus of Tietz as modified by Xu et al. with a fluid layer, in order to more efficiently control the pressure applied to the polishing belt.

Art Unit: 3723

*Allowable Subject Matter*

6. Claims 17,18 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 21-23 are allowed.

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cesna was cited to show another example of a grooved polishing belt.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantese McDonald whose telephone number is (703) 308-8722.



Joseph J. Hail, III  
Supervisory Patent Examiner  
Technology Center 3700

S.L.M.

December 10, 2002